

REMARKS

Claim Objections

Claims 3 and 4 were objected to because of the following informalities: Line 4 of Claim 3 and line 3 of Claim 4 cite “long axis.” The subject matter of claims 3 and 4 has been substantially incorporated in claim 1. Claims 3 and 4 have been cancelled. Thus, the rejection of claims 3 and 4 has been rendered moot.

Claim Rejections - 35 USC § 102

Claims 1, 2, 10 and 11 were rejected under 35 USC § 102(b) as being anticipated by Kenny (U.S. Patent No. 5,224,529). Independent claim 1 has been amended to clarify Applicant’s inventive concept rather than being amended for purposes of patentability. Claims 10 and 11 have been canceled, without prejudice. It is respectfully submitted that claim 1 and each of the claims that depend therefrom are patentable over Kenny.

The invention of claim 1 relates to an aid to be used by a wood turner to ease the process of creating hollowed vessels on a wood turning lathe. As background, wood turning lathes have been used for creating hollowed vessels for many years. Typically, a wood turner mounts a log or other medium onto a lathe and then uses a handheld cutting tool to remove the solid wood from inside the log while leaving an outer rim that forms the walls of the vessel.

Usually, a tool rest is placed next to the end grain of the log and the handheld tool is supported by the tool rest while the handheld tool is advanced into the end grain of the log to hollow the wood. This process is difficult for several reasons. First, there are forces placed on the tool that tend to push the tip of the tool downward as well as rotate the tool around its long

axis. As long as the tool tip is close to the tool rest, the forces are minimized. However, as the log is hollowed, the tool tip moves farther from the tool rest. The tool rest acts as a fulcrum and much more force is needed to control the tool tip. This becomes more pronounced as the depth of the vessel increases.

The invention of claim 1 is thus directed to a hollowing system that controls the tool movements along certain axes while allowing full movement along other axes. Thus, the tool can be advanced or retracted, moved laterally and selectively rotated to shape the inside of the vessel while emulating free hand hollowing and also without having to fight the significant forces being generated. This results in much easier, faster and safer removal of the solid wood to form the vessel.

Claim 1 has been amended to clarify that the stabilization assembly supports the boring member so that the boring member can reciprocate along its longitudinal axis. For example, the stabilization assembly can be provided with one or more ball bearings and/or a track to permit the boring member to reciprocate.

As the Examiner is aware, a rejection under 35 USC § 102(b) requires each and every feature of the claimed invention to be disclosed in the reference. Applicant respectfully disagrees with the rejection of claims 1 and 2 because the inventions recited in claims 1 and 2 differ from the “universal joint toolrest” arrangement taught by Kenny (and depicted in Figure 14 of Kenny). That is, claim 1 recites “the stabilization assembly adapted to prevent downward movement of the tool when the stabilization assembly is mounted adjacent to the lathe and the tool is extended past and supported by the tool rest”.

The universal joint toolrest of Kenny does not include any manner of restraining

downward movement of the tool, other than that initiated by the user. The solid stem 48 of Kenny is simply inserted into the sleeve portion 50 of the first T-bar 46 and is freely rotatable therein.

Moreover, the inventive concept of claims 1 and 2 recite “permitting horizontal movement of the boring member about the vertical axis . . .while the tool is being used for hollowing”. Kenny does not teach or suggest a stabilization assembly permitting horizontal movement of the boring member about the vertical axis . . .while the tool is being used for hollowing. That is the angle of attack (rake angle) of the universal joint toolrest of Kenny is fixed while hollowing so that the tool cuts a straight cavity into the workpiece so that nested bowls are created.

In addition, the universal joint toolrest of Kenny suffers from similar drawbacks as the prior art method described above. That is, as the workpiece is hollowed, the tool tip of Kenny moves farther from the first T-bar 46. The first T-bar 46 will act as a fulcrum and much more force will be needed to control the tool tip. This will become more pronounced as the depth of the vessel increases.

Thus, it is respectfully submitted that claims 1 and 2 and thus each of the claims which depend therefrom are not anticipated by the teachings of Kenny. Reconsideration and withdrawal of the rejection of claims 1 and 2 is respectfully requested.

Claim Rejections 35 USC § 103(a)

Claims 3-9 were rejected under 35 USC § 103(a) as being unpatentable over Kenny in view of Turner (U.S. Patent No. 3,981,211). The subject matter of claims 3 and 4 has been incorporated into claim 1 - thus, the following comments are applicable to amended claim 1. The rejection of claims 3-9 set forth in the Office Action is respectfully traversed.

To establish a prima facie case of obviousness, three basic criteria must be met (see MPEP § 2142). First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

As discussed above, it is Applicant's position that the universal joint toolrest of Kenny does not include any manner of restraining downward movement of the tool as recited in claim 1, and thus claims 3-9 which depend therefrom. Moreover, Turner does not appear to teach the deficiencies of Kenny. That is, Applicant agrees that Turner teaches a tool holding apparatus adapted to releasably lock a tool, such as a drill or reamer, within the tailstock spindle of a lathe. However, Turner does not appear to teach or suggest modifying the universal joint toolrest of Kenny to restrain downward movement of the tool. For this reason alone, it is believed that claim 1, and thus each of the claims that depend therefrom are not obvious over Kenny in view of Turner.

Moreover, it is Applicant's belief that MPEP § 2143.01 supports the patentability of claim 1. That is, MPEP § 2143.01 recites "THE PRIOR ART MUST SUGGEST THE

DESIRABILITY OF THE CLAIMED INVENTION.” As discussed by the Examiner, Kenny does not teach a rotation prevention assembly engaging the articulation assembly and the boring member to prevent rotation of the boring member about a longitudinal axis of the boring member, as recited in original claim 3 (claim 3 has been incorporated into claim 1 and cancelled) and each of the claims that depend therefrom. Although it is true that Turner does teach a tool holding apparatus adapted to releasably lock a tool to prevent rotation, there is no suggestion that preventing rotation is desirable in the universal joint toolrest of Kenny. In fact preventing rotary movement in the universal joint toolrest would appear to destroy the main purpose of Kenny, that is to rotate and slice off the frustoconical portion of the workpiece.

In view thereof, Applicant respectfully submits that claims 1-2 and 5-9 are not obvious in view of the combination of Kenny and Turner. Reconsideration and withdrawal of the rejection of claims 1-2 and 5-9 is respectfully requested.

Supplemental IDS

Attached hereto is a Supplemental IDS including website printoffs discussing two prior art hollowing systems. The article entitled “Shop Built Hollowing Rig with Laser for Mini Lathe” describes a shop made hollowing system. The website printoff showing the “Kel McNaughton Hollowing Rig” shows a commercially available hollowing system available from Kelton Industries, Ltd. Neither the shop made hollowing system nor the Kel McNaughton Hollowing Rig includes “a rotational prevention assembly constructed to selectively permit and prevent rotation of the boring member about the longitudinal axis of the boring member” as recited in claim 1 and thus each of the claims that depend therefrom.

Newly Added Claims 12-19

New claims 12-19 have been added to the patent application to provide Applicant with additional protection to which he is entitled. Applicant respectfully requests entry of new claims 12-19 into the patent application. Claims 12-19 are also believed to be patentable over the teachings of Kenny because claim 12 specifically recites a “stabilization assembly adapted to prevent downward movement of the tool when the stabilization assembly is mounted adjacent to the lathe and the tool is extended past and supported by the tool rest.” As discussed above, Kenny does not teach or even suggest a stabilization assembly adapted to prevent downward movement of the tool when the stabilization assembly is mounted adjacent to the lathe and the tool is extended past and supported by the tool rest.

Further, the inventive concept of claim 12 is also different from the shop made hollowing system and the Kel McNaughton Hollowing Rig. That is, claim 12 recites:

an articulation assembly comprising:

a first housing supporting the boring member; and

a second housing pivotally mounted to the first housing, the second

housing mounted on the horizontal support to permit lateral

movement of the boring member while the tool is being used for

hollowing.

Neither the shop made hollowing system, nor the Kel McNaughton Hollowing Rig include a first housing supporting the boring member, and a second housing pivotally mounted to the first housing, with the second housing mounted on a horizontal support to permit lateral movement of the boring member while the tool is being used for hollowing.

Therefore, it is believed that the inventive concepts recited in newly added claims 12-19 are patentable over Kenny, as well as the shop made hollowing system and the Kel McNaughton Hollowing Rig. Applicant respectfully requests allowance of newly added claims 12-19.

CONCLUSION

The foregoing is intended to be a complete response to the Office Action dated June 1, 2005. Applicant respectfully submits that each and every objection and rejection of the claims, as now pending, have been overcome, and that such claims are now in a condition for allowance. Reconsideration and withdrawal of the objections and rejections is respectfully requested.

Should the Examiner have any questions regarding the foregoing, Applicant's attorney would welcome a telephonic interview with the Examiner.

Respectfully submitted,



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